

Claims

- [c1] 1.A method for managing power consumptions of a sending driver and a receiving driver, wherein said sending driver sends data received from a sender to said receiving driver via a transmission line, said method comprising:
- coupling a sensor to said sender and said sending driver; in response to an amount of data that needed to be sent by said sender, adjusting a supply voltage level by said sensor to said sending driver accordingly; and transmitting data from said sender by said sending driver on said transmission line to said receiving driver according to said adjusted supply voltage level.
- [c2] 2.The method of Claim 1, wherein said method further includes adjusting a transmission frequency by said sensor to said sending driver according to said amount of data needed to be sent by said sender.
- [c3] 3.The method of Claim 2, wherein said method further includes transmitting data from said sender by said sending driver on said transmission line to said receiving driver according to said adjusted transmission frequency.

- [c4] 4.The method of Claim 1, wherein said sensor includes a data level detector.
- [c5] 5.The method of Claim 1, wherein said sensor includes a programmable voltage regulator.
- [c6] 6.The method of Claim 1, wherein said sensor includes a clock frequency selector.
- [c7] 7.The method of Claim 1, wherein said method further includes coupling a controller to said receiving driver.
- [c8] 8.The method of Claim 7, wherein said method further includes adjusting a supply voltage level by said controller to said receiving driver according to the voltage level of data on said transmission line.
- [c9] 9.The method of Claim 7, wherein said controller includes a pulse amplitude detector.
- [c10] 10.The method of Claim 7, wherein said controller includes a programmable voltage regulator.
- [c11] 11.An apparatus for managing power consumptions of a sending driver and a receiving driver, wherein said sending driver sends data received from a sender to said receiving driver via a transmission line, said apparatus comprising:

a sensor coupled to said sender and said sending driver; means for adjusting a supply voltage level to said sending driver according to an amount of data that needed to be sent by said sender detected by said sensor; and means for transmitting data from said sender by said sending driver on said transmission line to said receiving driver according to said adjusted supply voltage level.

[c12] 12.The apparatus of Claim 11, wherein said sensor further includes means for adjusting a transmission frequency of said sending driver according to said amount of data needed to be sent by said sender.

[c13] 13.The apparatus of Claim 12, wherein said sending driver further includes means for transmitting data on said transmission line to said receiving driver according to said adjusted transmission frequency.

[c14] 14.The apparatus of Claim 11, wherein said sensor includes a data level detector.

[c15] 15.The apparatus of Claim 11, wherein said sensor includes a programmable voltage regulator.

[c16] 16.The apparatus of Claim 11, wherein said sensor includes a clock frequency selector.

[c17] 17.The apparatus of Claim 11, wherein said apparatus

further includes a controller coupled to said receiving driver.

- [c18] 18.The apparatus of Claim 17, wherein said controller further includes means for adjusting a supply voltage level to said receiving driver according to a voltage level of data on said transmission line.
- [c19] 19.The apparatus of Claim 17, wherein said controller includes a pulse amplitude detector.
- [c20] 20.The apparatus of Claim 17, wherein said controller includes a programmable voltage regulator.